

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-7 (canceled).

Claim 8 (new): A DC/DC converter for, through the opening and closing of a switching element, supplying power from an input power supply, via a coil, to an output terminal connected to a load, and adjusting the voltage of the output terminal, the DC/DC converter comprising:

a coil current detection element interposed between the coil and the output terminal;

a smoothing capacitor connected to the load side of the coil current detection element to smooth the voltage of the output terminal;

a reference current value control circuit arranged to detect the voltage of the coil side of the coil current detection element and to control a reference current value of a current flowing in the coil; and

a feedback circuit arranged to, in synchrony with a reference clock of a clock generator, close the switching element, and open the switching element when the current flowing in the coil exceeds the reference current value.

Claim 9 (new): The DC/DC converter according to claim 8, wherein the coil current detection element is a coil current detection resistor.

Claim 10 (new): The DC/DC converter according to claim 8, wherein the smoothing capacitor is a ceramic capacitor.

Claim 11 (new): The DC/DC converter according to claim 8, wherein an equivalent series resistance value of the smoothing capacitor is smaller than that of an electrolytic capacitor.

Claim 12 (new): The DC/DC converter according to claim 8, wherein the resistance value of the coil current detection element is larger than the equivalent series resistance value of the smoothing capacitor.

Claim 13 (new): The DC/DC converter according to claim 8, wherein the zero frequency of a frequency characteristic is determined by the coil current detection element and the smoothing capacitor.

Claim 14 (new): A DC/DC converter for, through the opening and closing of a switching element, supplying power from an input power supply, via a coil, to an output terminal connected to a load, and adjusting the voltage of the output terminal, with feedback to the switching element, the DC/DC converter comprising:

a coil current detection element interposed between the coil and the output terminal to detect current flowing in the coil; and

a smoothing capacitor connected to the load side of the coil current detection element to smooth the voltage of the output terminal; wherein

the zero frequency of a frequency characteristic is determined by the coil current detection element and the smoothing capacitor.

Claim 15 (new): The DC/DC converter according to claim 14, wherein the coil current detection element is a coil current detection resistor.

Claim 16 (new): The DC/DC converter according to claim 14, wherein the smoothing capacitor is a ceramic capacitor.

Claim 17 (new): The DC/DC converter according to claim 14, wherein an equivalent series resistance value of the smoothing capacitor is smaller than that of an electrolytic capacitor.

Claim 18 (new): The DC/DC converter according to claim 14, wherein the resistance value of the coil current detection element is larger than the equivalent series resistance value of the smoothing capacitor.